(Added) An antibody immunoreactive with a 5-enolpyruvylshikimate-3-phosphate synthase enzyme, the enzyme comprising the sequence domains:

 $-R-X_1-H-X_2-E-$ (SEQ ID NO:37), in which

X₁ is G, S, T, C, Y, N, Q, D or E;

 X_2 is S or T; and -G-D-K-X₃- (SEQ ID NO:38), in which

-S-A-Q-X₄-K- (SEQ ID NØ:39), in which

 X_4 is A, R, N, D/C, Q, E, G, H, I, L, K, M, F, P, S, T, W, Y or V; and

-N-X₅-T-R-(SEQ ID NO:40), in which

X₅ is A, R, N, D, C, Q, E, G, H, I, L, K, M, F, P, S, T, W, Y or V.

(Added) The antibody of claim 101, wherein X₁ is D or N; X₂ is S or T; X₃ is S or T; X₄

V, I or L; and X_5 is P or Q.

(Added) The artibody of claim 101, wherein the enzyme comprises SEQ ID NO:3.

(Added) The antibody of claim 101, further defined as a polyclonal antibody.

(Added) The antibody of claim 101, further defined as a monoclonal antibody.

(Added) A method of detecting a 5-enolpyruvylshikimate-3-phosphate synthase enzyme in a sample, the method comprising:

selecting a sample suspected of containing a 5-enolpyruvylshikimate-3-phosphate

synthase enzyme;

contacting the sample with an antibody to form an enzyme-antibody complex; and detecting the presence of the enzyme-antibody complex; wherein the antibody is immunoreactive with SEO ID NO:3.

(Added) A method of detecting a \5-enolpyruvylshikimate-3-phosphate synthase enzyme in plant cells or plant tissue, the method comprising:

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